

Lake Mendocino and Lake Sonoma Water Accounting Weekly Report (Term 12, Dec 2021 TUCO)

Report Date: 2/4/2022

Units are cfs unless noted otherwise

	<u>1/28/2022</u>	<u>1/29/2022</u>	<u>1/30/2022</u>	<u>1/31/2022</u>	<u>2/1/2022</u>	<u>2/2/2022</u>	<u>2/3/2022</u>
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	46.0	46.0	46.0	46.0	46.0	46.0	46.0
PVID Requested Delivery	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PVID Canals Actual Delivery	2.0	2.0	2.0	2.0	2.0	2.0	2.0
East Fork Release	44.0	44.0	44.0	44.0	44.0	44.0	44.0
PVID E Fork Diversions	3.0	3.0	3.0	3.0	3.0	3.0	3.0
PVID Water Use - PG&E Contract	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PVID Water Use - License 5264	0.0	0.0	0.0	0.0	0.0	0.0	0.0
East Fork Downstream of PVID (Import)	41.0	41.0	41.0	41.0	41.0	41.0	41.0
PVID Canal Net Return Flow (assumed)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
East Fork / Potter Valley Reach Analysis							
USGS E Fork @ Calpella	70.4	69.6	68.5	67.6	67.7	66.6	66.1
Net Reach Loss(-)/Gain(+)	+24.4	+23.6	+22.5	+21.6	+21.7	+20.6	+20.1
Unimpaired Natural Flow @ Calpella (est.)	29.4	28.6	27.5	26.6	26.7	25.6	25.1
Non-PVID East Fork Net Reach Losses (est.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Natural Flow	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Import (neg. value is return flow)	0.0	0.0	0.0	0.0	0.0	0.0	0.0

II. Lake Mendocino

Reservoir Operations

Calculated Inflow (ac-ft)	133	178	93	149	142	121	138
(cfs)	67	90	47	75	71	61	70
Natural Flow	29	49	28	34	30	26	29
Import	38	41	20	41	41	36	41
Storage Change (ac-ft)	-142.0	-100.0	-184.0	-127.0	-85.0	-43.0	+0.0
(cfs)	-72	-50	-93	-64	-43	-22	+0
Stored Natural Flow (cfs)	0	0	0	0	0	0	0
Stored Import Water (cfs)	0	0	0	0	0	0	0
Evaporation (ac-ft)	6.6	6.6	7.5	7.5	6.6	6.6	6.6
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	135	137	136	135	111	80	66
Storage (Project Water)	68	47	89	60	40	18	0
Natural Flow	29	49	28	34	30	26	27
Import Water	38	41	20	41	41	36	39
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage	<i>Rvr mi.</i>						
CVD Release	99.9	135	137	136	135	111	80
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	67	90	47	75	71	61	66
Project Water Release Required	No	No	No	No	No	No	No

III. Upper Russian River Reach

Minimum Instream Flow Requirement

Controlling Compliance Gage

Min Gage Flow	151	152	150	149	125	93	78
Controlling Gage	Forks	Forks	Forks	Forks	Forks	Forks	Forks
All Compliance Gages							
	<i>Rvr mi.</i>						
Forks (CVD + USGS 11461000)	99.0	151	152	150	149	125	93
Talmage (USGS 11462080)	96.1	204	201	200	200	178	145
Hopland (USGS 11462500)	84.8	240	237	234	230	219	185
Cloverdale (USGS 11463000)	70.9	382	376	370	365	360	329
Geyserville (USGS 11463500)	54.4	379	371	363	357	351	331
Jimtown (USGS 11463682)	48.5	398	386	375	366	356	341
Digger Bend (USGS 11463980)	38.2	>400 cfs	>400 cfs	>400 cfs	>400 cfs	n/d	n/d
Healdsburg (USGS 11464000)	35.6	448	434	422	411	399	384

Net Reach Loss(-)/Gain(+)

Forks - Talmage	+54	+51	+48	+51	+46	+46	+48
Talmage - Hopland	+35	+35	+34	+31	+33	+34	+32
Hopland - Cloverdale	+141	+138	+135	+134	+134	+135	+134
Cloverdale - Jimtown	+12	+7	+2	-3	-8	-9	-1
Jimtown - Digger Bend	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Digger Bend - Healdsburg *when Digger Bend > 400 cfs, next u/s gage (Jimtown) used	+48	+46	+46	+43	+41	+39	+36
Upper Russian Net Reach Loss/Gain	+290	+277	+265	+258	+246	+246	+249

CVD Project Water Release to Meet Min Flow Requirement

Net Reach Loss(-)/Gain(+) to Controlling Gage	+0	+0	+0	+0	+0	+0	+0
Storage (Project Water)	0	0	0	0	0	0	0
Pass-through Water (Nat. + Imp.) + Natural	0	0	0	0	0	0	0
Total Pass-through Water	67	90	47	75	71	61	66
Project Water Release Required	Yes	Yes	Yes	Yes	No	Yes	No

Notes:
 - Water Accounting for the Upper Russian River is an analysis that approximates the current conditions based on methodology in Term 11 (2/11/21 Order) report and modified by Term 12 (6/14/21 Order) report. Values listed include estimated values where measurements are not currently available (red italics).

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IV. Lake Sonoma							
Lake Sonoma							
Storage Change (ac-ft)	-38.0	-58.0	-76.0	-39.0	-95.0	-77.0	-96.0
(cfs)	-19	-29	-38	-20	-48	-39	-48
Evaporation (ac-ft)	6.3	6.3	6.3	7.6	6.7	7.8	6.7
Inflow (Natural Flow)	60	51	42	61	32	42	32
WSD Release Gage	76	77	77	77	77	77	77
Storage (Project Water)	16	26	35	16	45	35	45
Natural Flow	60	51	42	61	32	42	32

V. Lower Dry Creek Reach

Minimum Instream Flow Requirement		75	75	75	75	75	75	75
Controlling Compliance Gage								
Min Gage Flow		74	77	77	77	77	77	77
Controlling Gage		Yoakim	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release
All Compliance Gages								
	<i>Crk mi.</i>							
WSD Release	14.3	76	77	77	77	77	77	77
Yoakim (USGS 11465200)	11.1	74	80	80	103	102	101	101
Lambert (USGS 11465240)	6.8	113	115	114	108	107	107	106
Dry Crk Mouth (USGS 11465350)	0.1	116	116	115	114	112	110	108
WSD to Russian River Confluence Reach Analysis								
Total Pass-through Water		60	51	42	61	32	42	32
Net Reach Loss(-)/Gain(+)								
WSD - Yoakim		+26	+26	+26	+26	+25	+24	+24
Yoakim - Lambert		+7	+6	+5	+6	+5	+6	+5
Lambert - Dry Crk Mouth		+8	+7	+7	+5	+4	+3	+2
WSD - Dry Crk Mouth		+41	+40	+38	+36	+34	+33	+31
WSD Project Water Release to Meet Min Flow Requirement								
Net Reach Loss/Gain to Controlling Gage		+26	+26	+26	+26	+25	+24	+24
Project Water Release Required		Yes	Yes	Yes	Yes	Yes	Yes	Yes

VI. Russian River - Dry Creek Confluence

Upper Russian River Flow (Healdsburg Gage)								
L. Mendocino Project Water + Import Water		106	88	108	101	81	54	39
Natural Flow		319	326	292	292	277	272	276
Dry Creek Flow (Mouth Gage)								
L. Sonoma Project Water		16	26	35	16	45	35	45
Natural Flow		101	90	80	98	67	75	63
Russian River d/s of Confluence Flow								
L. Mendocino Project Water + Import Water		106	88	108	101	81	54	39
L. Sonoma Project Water		16	26	35	16	45	35	45
Natural Flow		420	416	372	390	344	347	339

VII. Lower Russian River Reach

Minimum Instream Flow Requirement								
Controlling Compliance Gage								
Min Gage Flow		639	619	602	587	571	553	526
Controlling Gage		Hacienda	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda
All Compliance Gages								
	<i>Rvr mi.</i>							
Windsor (USGS 11465390)	26.6	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Hacienda (USGS 11467000)	21.8	639	619	602	587	571	553	526
Confluence to Windsor Reach Analysis								
Net Reach Loss/Gain to Windsor Gage		-	-	-	-	-	-	-
L. Mendocino Project Water + Import Water		-	-	-	-	-	-	-
L. Sonoma Project Water		-	-	-	-	-	-	-
Natural Flow		-	-	-	-	-	-	-
Confluence to SCWA Wohler Production Facility Reach Analysis								
Approx. Flow u/s of Wohler		702	682	651	634	633	603	587
Net Reach Loss(-)/Gain(+)		+138	+132	+114	+110	+123	+109	+123
L. Mendocino Project Water + Import Water		106	88	108	101	81	54	39
L. Sonoma Project Water		14	24	33	13	42	33	43
Natural Flow		558	548	486	500	467	456	462
Confluence to Hacienda (Guerneville) Reach Analysis								
Net Reach Loss(-)/Gain(+)		+75	+69	+65	+62	+60	+59	+62
L. Mendocino Project Water + Import Water		106	88	108	101	81	54	39
L. Sonoma Project Water		0	0	0	0	0	0	0
Natural Flow		509	509	470	465	446	438	444

VIII. Water Production under Sonoma Water Water Rights (ac-ft)

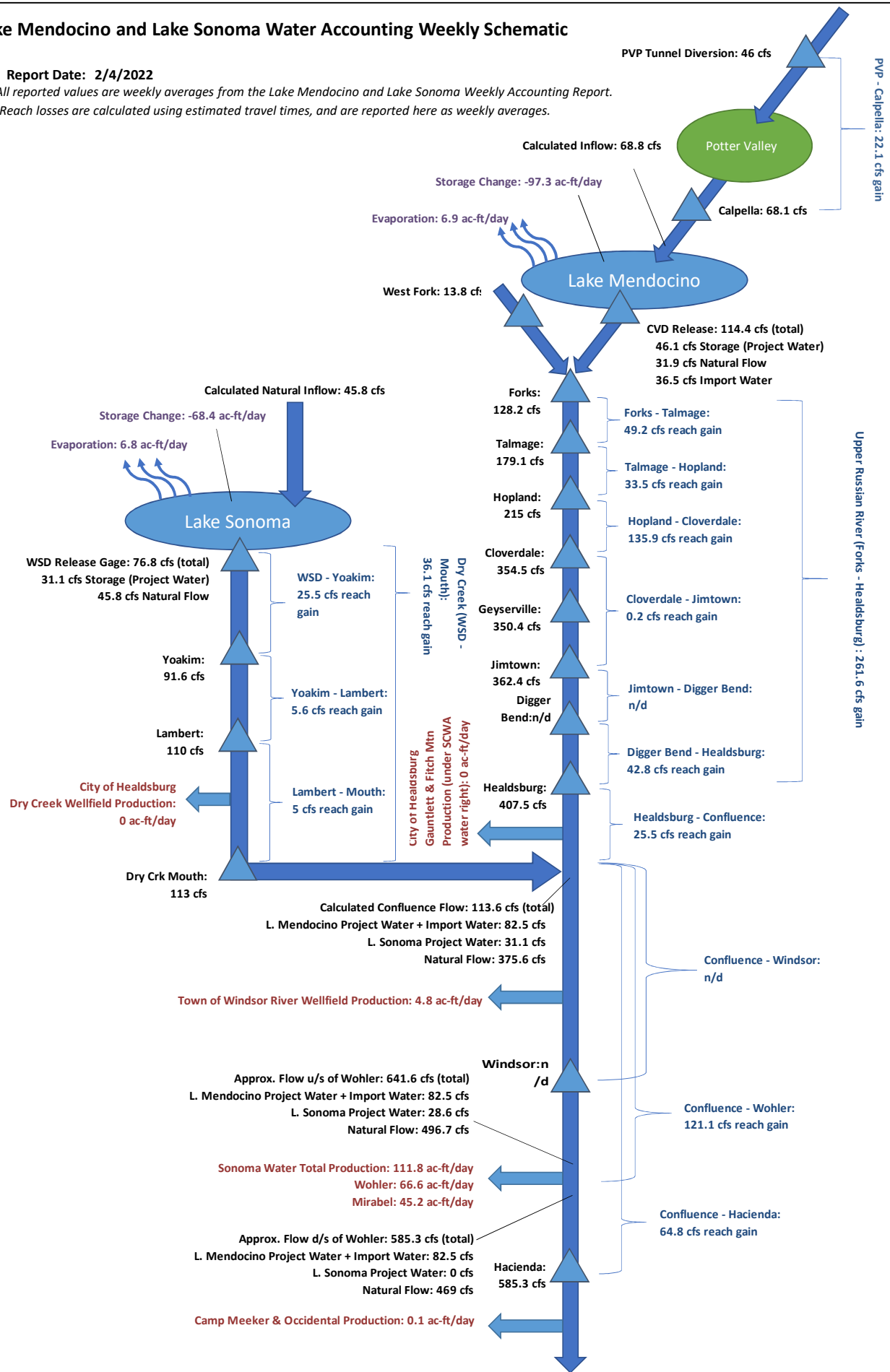
Lower Russian River								
Sonoma Water Total		124.8	124.6	96.8	93.5	123.7	98.9	120.2
Wohler		81.8	81.0	50.2	47.1	80.1	63.1	62.7
Mirabel		43.0	43.6	46.6	46.4	43.6	35.7	57.6
Town of Windsor River Wellfield		4.6	4.3	4.4	5.8	5.8	4.3	4.4
Camp Meeker & Occidental		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Upper Russian River								
City of Healdsburg								
Gauntlett & Fitch Mtn		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry Creek								
City of Healdsburg								
Dry Creek Wellfield		0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes:
- Water Accounting for the Lower Russian River and Dry Creek is an analysis that approximates the current conditions based on the methodology in Term 12 (6/14/21 Order) report. Values listed include estimated values where measurements are not currently available (red italics).

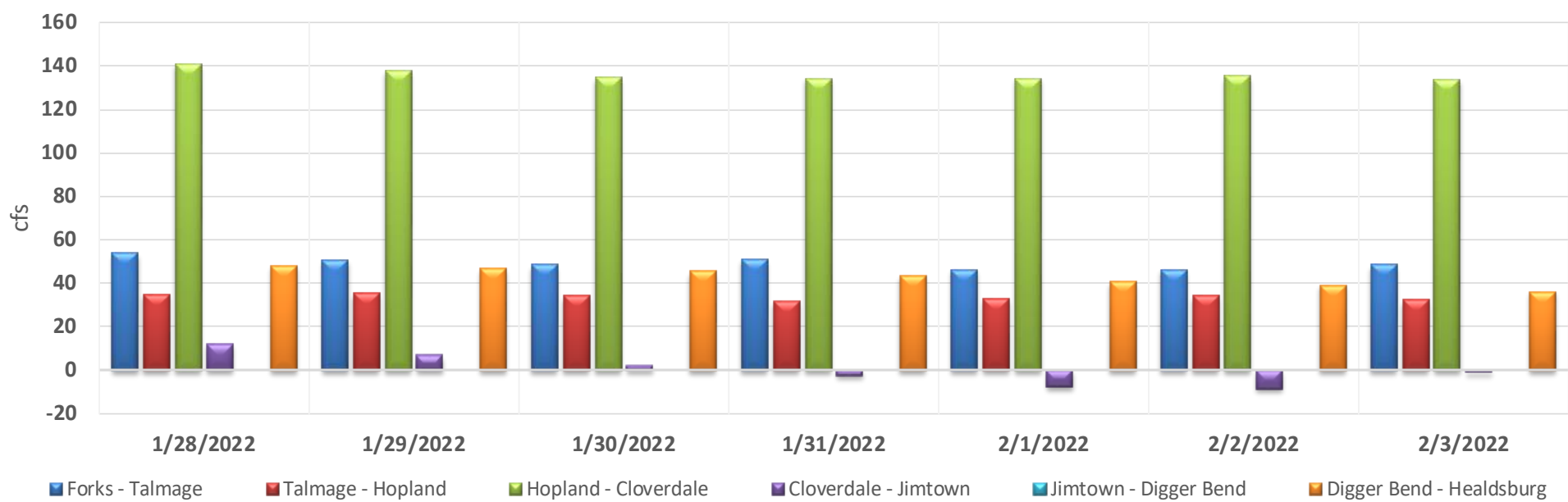
Lake Mendocino and Lake Sonoma Water Accounting Weekly Schematic

Report Date: 2/4/2022

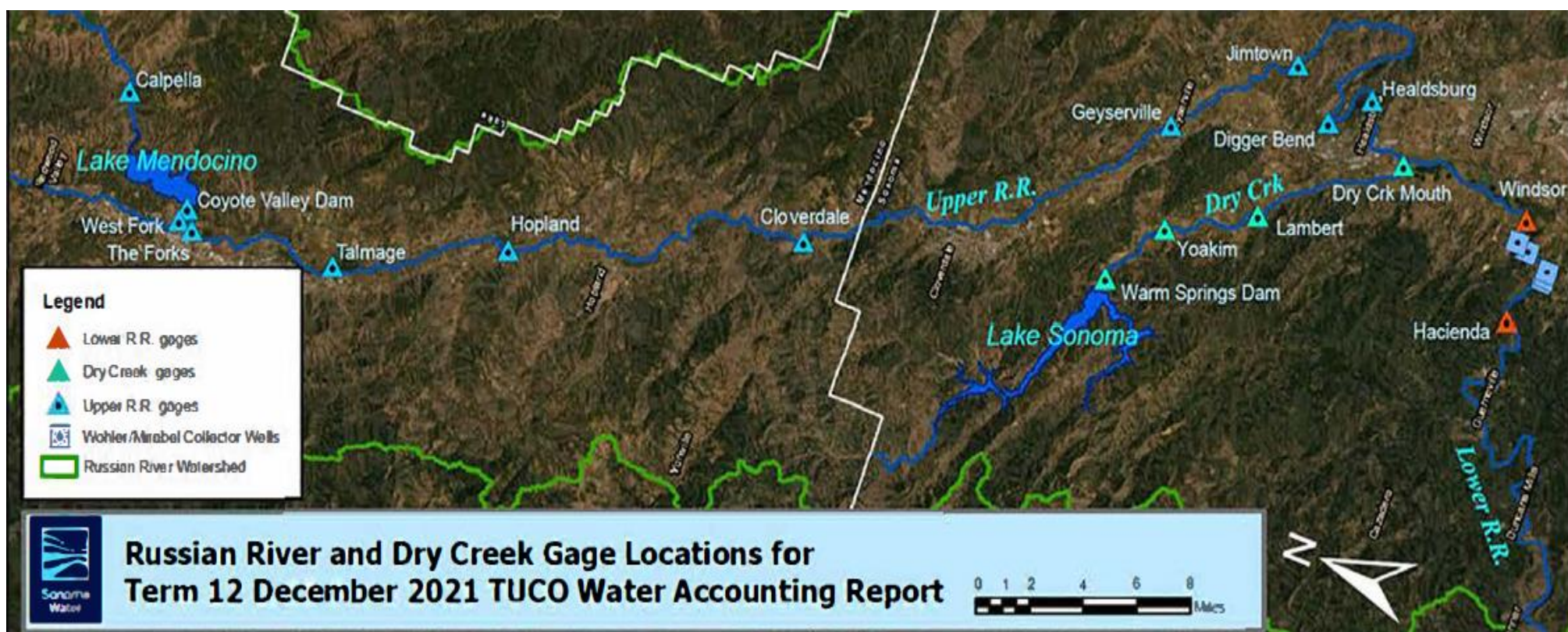
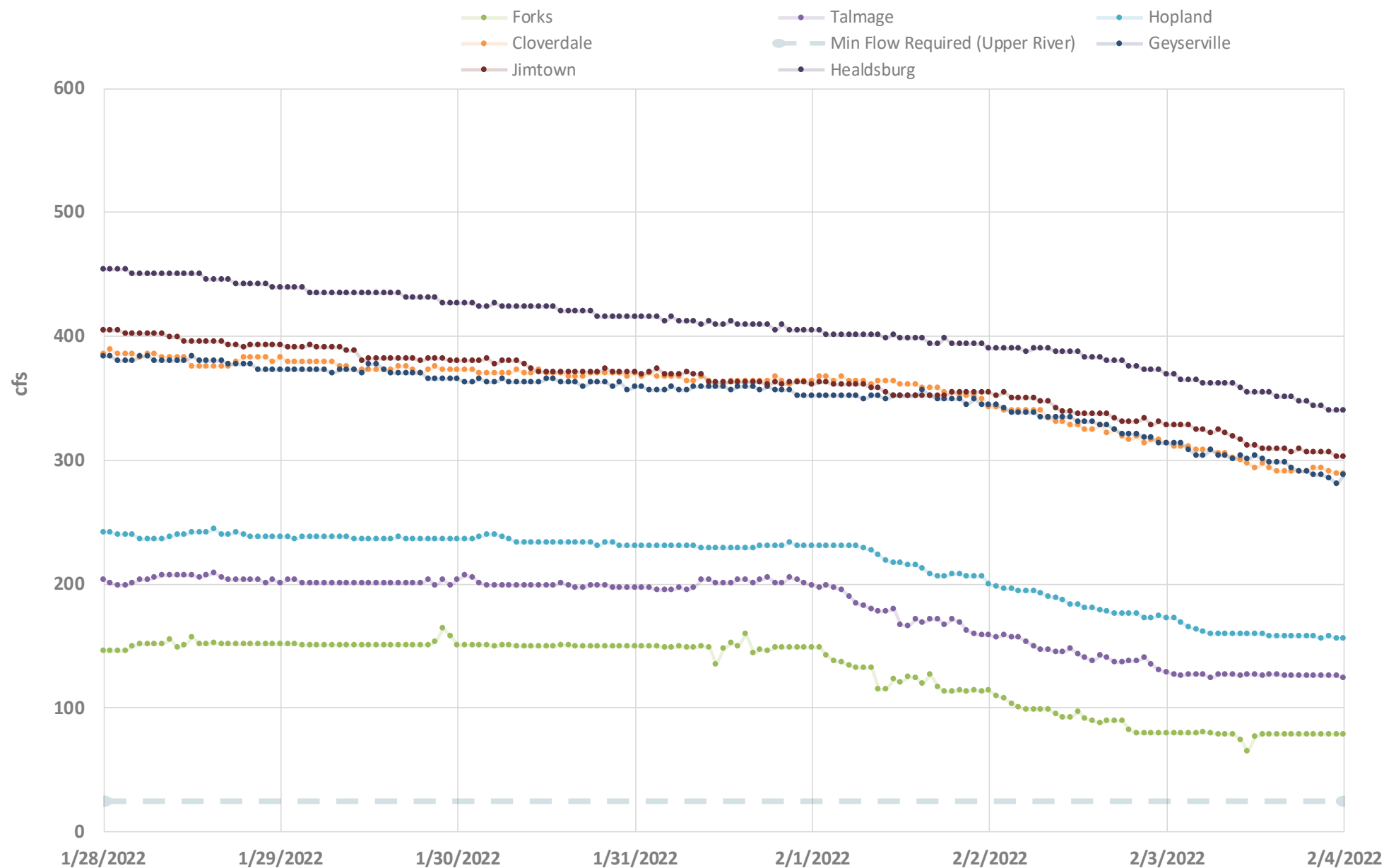
All reported values are weekly averages from the Lake Mendocino and Lake Sonoma Weekly Accounting Report.
Reach losses are calculated using estimated travel times, and are reported here as weekly averages.



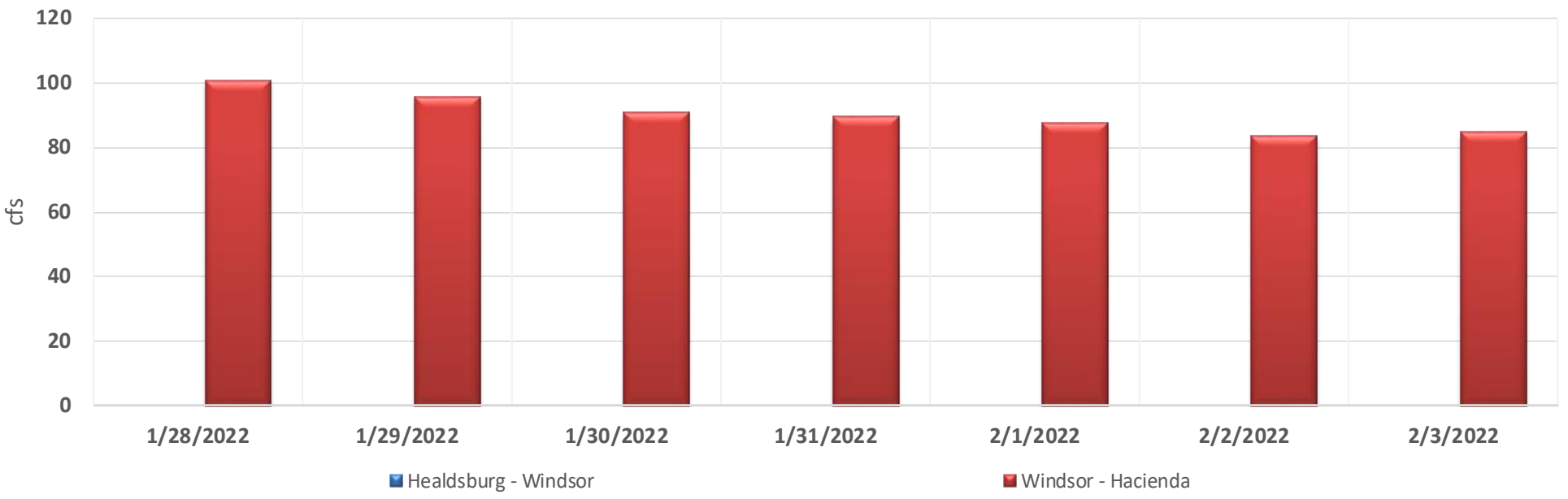
UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



UPPER RUSSIAN RIVER STREAM FLOWS

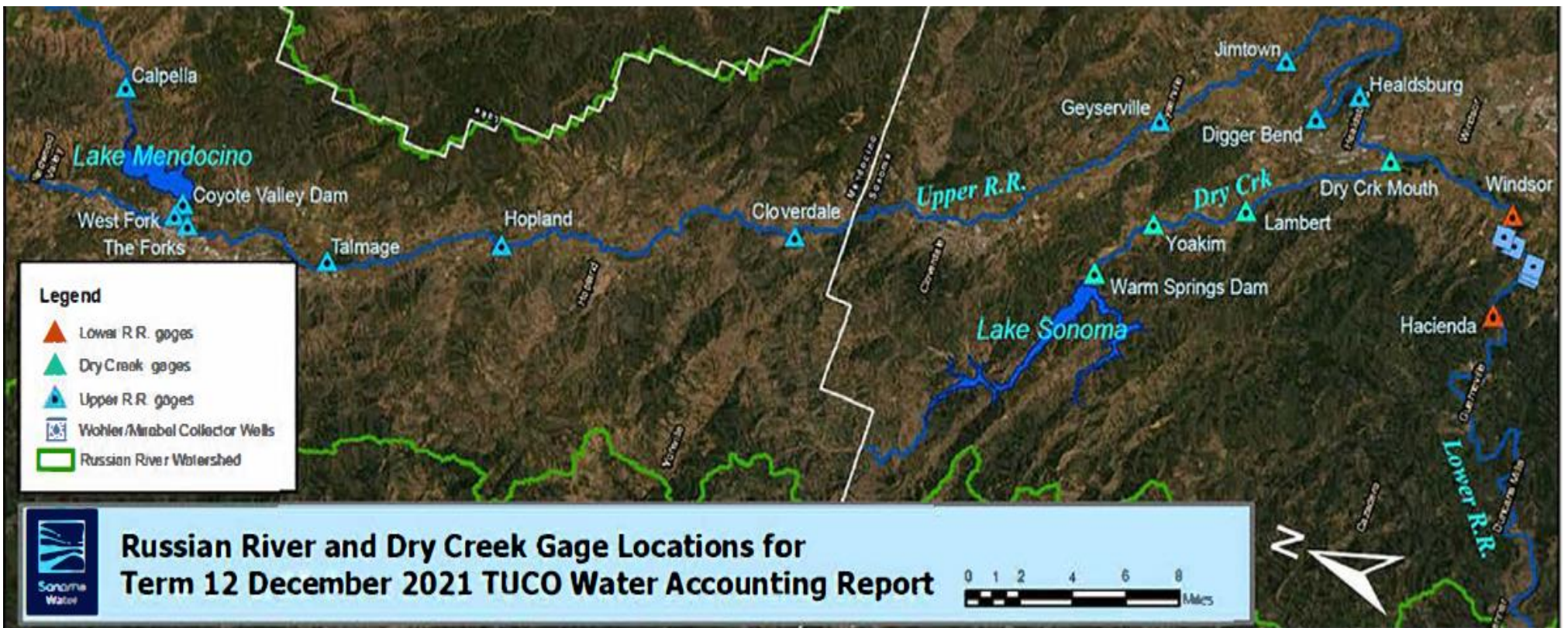
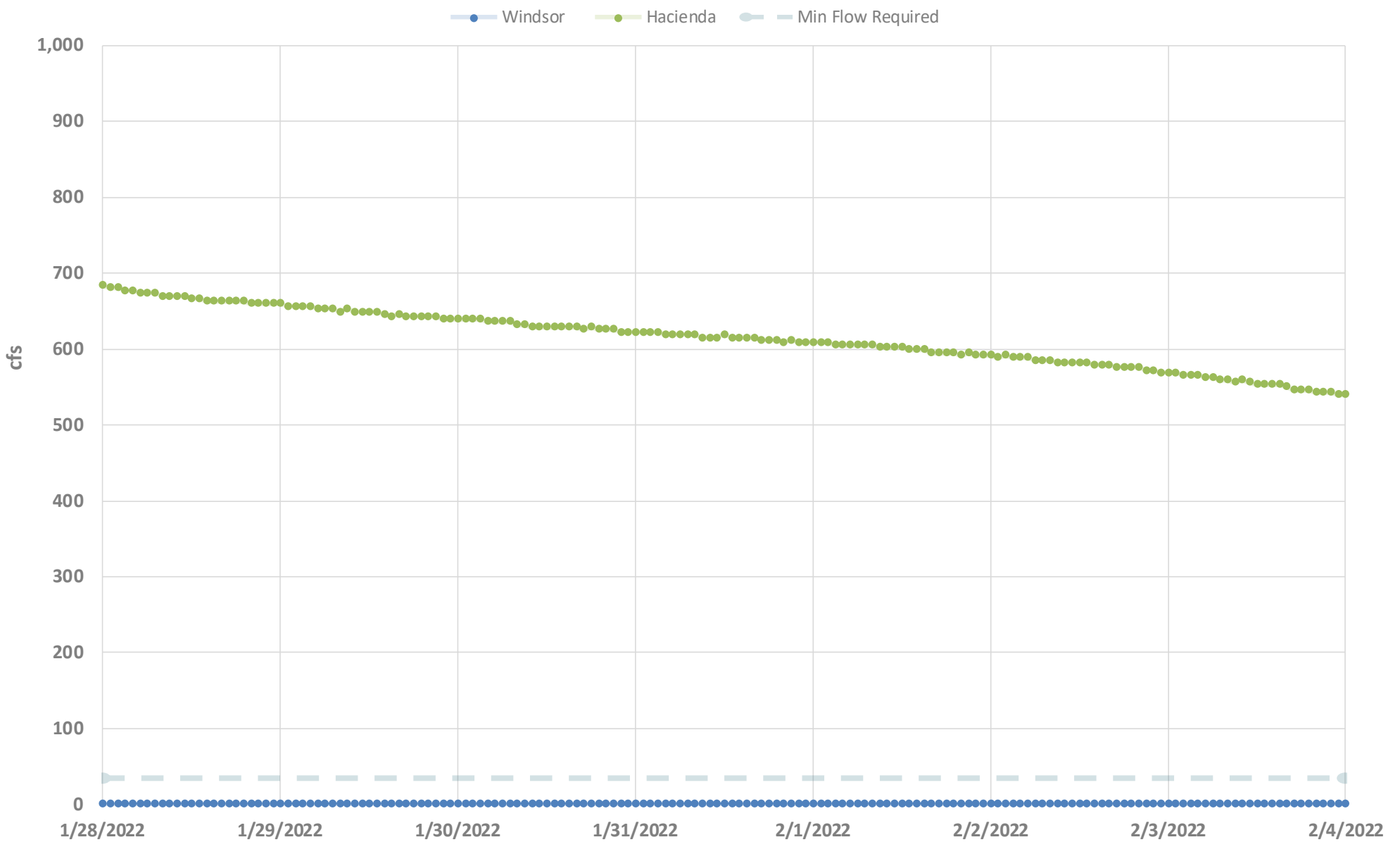


LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)

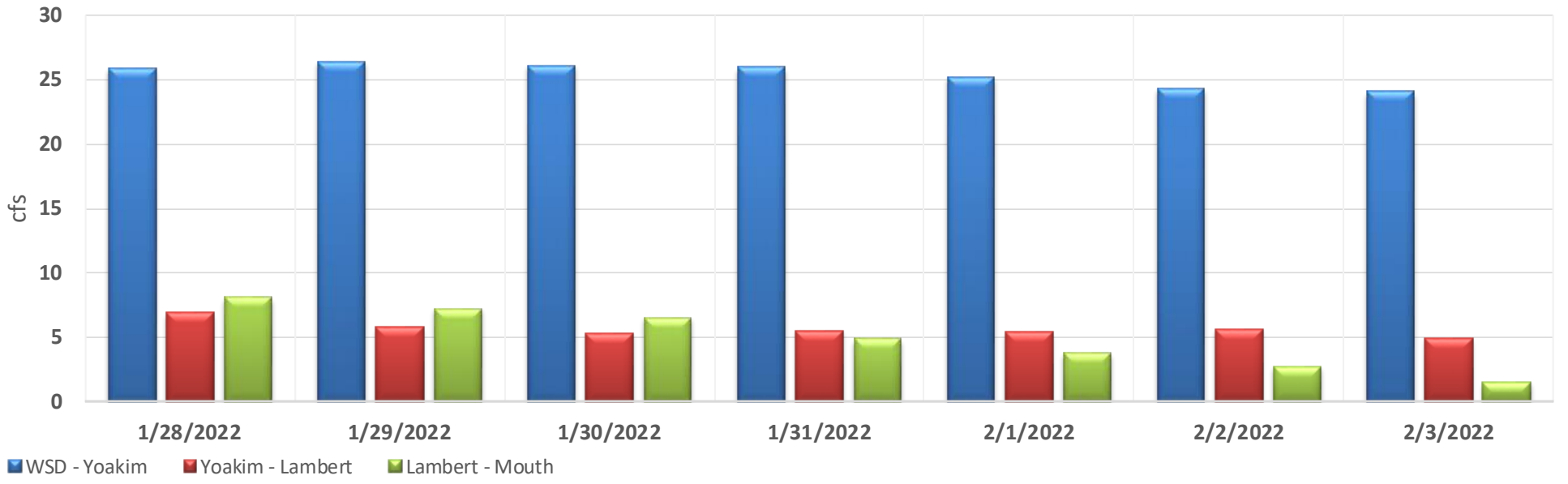


Note: Windsor gage is a seasonal gage and not operational. Reach gains for Windsor – Hacienda reach calculated with Healdsburg gages as upstream gages

LOWER RUSSIAN RIVER STREAM FLOWS



DRY CREEK NET REACH GAINS (+) / LOSSES (-)



DRY CREEK STREAM FLOWS

